

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (Currently Amended) A method ~~for printing a pattern, the method~~ comprising:
determining an illumination scheme in response to ~~the a~~ pattern; and
printing the pattern, wherein said printing comprises directing, in response to the determination, at least one incident beam of radiation ~~having a fundamental frequency~~; via a medium, towards an intermediate layer ~~such as~~, each said incident beam having a fundamental frequency and serving to excite and propagate ~~at least one a~~ third harmonic beam ~~that propagates~~ through at least a portion of the intermediate layer towards a radiation sensitive layer; ~~whereas the layer, said~~ radiation sensitive layer is being sensitive to third harmonic radiation and is substantially not sensitive to radiation of the fundamental frequency.
2. (Currently Amended) The method of claim 1 wherein the printing step of directing comprising comprises focusing ~~at least one each incident~~ beam of radiation onto the intermediate layer.
3. (Currently Amended) The method of claim 2 wherein a focal point of ~~a each incident beam of fundamental frequency~~ is substantially located at an interface defined by the medium and the intermediate layer.
4. (Original) The method of claim 1 wherein (i) the product of the sensitivity of the radiation sensitive layer to third harmonic radiation and the intensity of the third harmonic radiation is greater than a radiation sensitive layer threshold, and (ii) the product of the sensitivity of the radiation sensitive layer to fundamental radiation and the intensity of the fundamental radiation is less than the threshold.
5. (Currently Amended) The method of claim 1 wherein ~~the each incident beam of fundamental frequency~~ is characterized by a short duration.
6. (Currently Amended) The method of claim 1 wherein ~~the each incident beam of fundamental radiation~~ is characterized by high intensity.

7. (Currently Amended) The method of claim 1 wherein ~~the~~ each fundamental frequency is within the ~~ultra-violet ultraviolet~~ and extreme ~~ultra-violet ultraviolet~~ spectral range.
8. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising directing at least two of the incident beams ~~of fundamental frequency~~ simultaneously towards at least two respective locations of the intermediate layer.
9. (Currently Amended) The method of claim 1 ~~whereas~~ wherein a $\chi^{(3)}$ of the medium differs from a $\chi^{(3)}$ of the intermediate layer.

10-18. (Withdrawn)